

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 September 2005 (09.09.2005)

PCT

(10) International Publication Number
WO 2005/083882 A1

(51) International Patent Classification⁷: H03H 9/25, (74) Agent: MISCHLEWSKI, Darryl; IP Strategies, P O Box H01L 41/04, G01N 33/48, 29/00 1254, Camberwell, VIC 3124 (AU).

(21) International Application Number: PCT/AU2005/000244

(22) International Filing Date: 25 February 2005 (25.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004900942 26 February 2004 (26.02.2004) AU

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

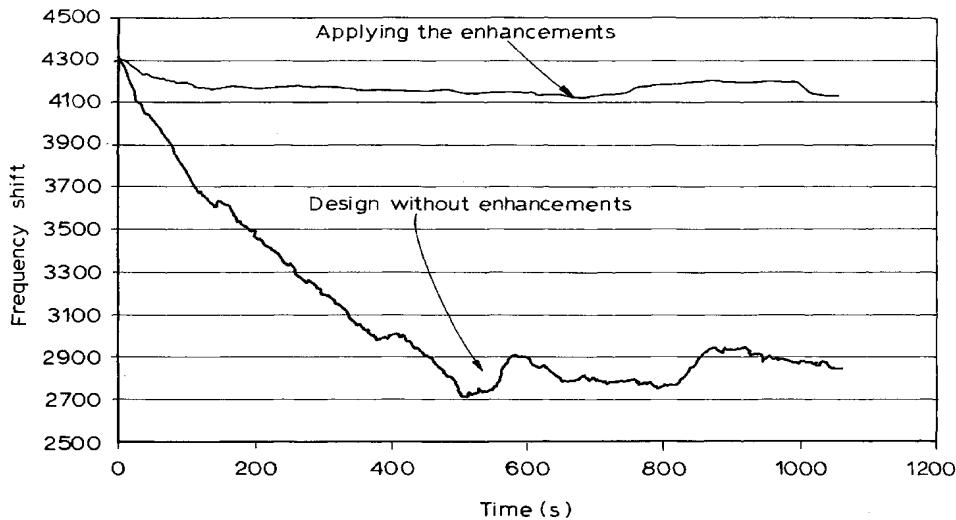
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: LAYERED SURFACE ACOUSTIC WAVE SENSOR



(57) Abstract: A surface acoustic wave sensor which incorporates: a) a first layered SAW device consisting of a piezoelectric crystal such as lithium niobate or lithium tantalate with interdigital electrodes on its surface, and second piezoelectric layer such as zinc oxide over said interdigital electrodes b) a second layered SAW device consisting of a piezoelectric crystal with interdigital electrodes on its surface, a second piezoelectric layer over said interdigital electrodes and an analyte sensitive surface such as gold on said second piezoelectric layer c) both saw devices are fabricated on the same substrate d) reflectors are located adjacent the interdigital electrodes in each saw device to reduce the bandwidth of the device e) the resonator circuits of each saw sensor incorporate amplifiers which are dependent.

WO 2005/083882 A1



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